BEGIN

REEL 64

BORISOV, S. V.

AVDEYEV, B.A.; BALASHOV, B.F., kandidat tekhnicheskikh nauk, retsenzent; KHARITONOV, I.I., inzhener, retsenzent; BORISOV, S.V., inzhener, redaktor; MODEL', B.I., tekhnicheskiy redaktor.

[Testing machines and instruments] Ispytatel'nye mashiny i pribory. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1957. 350 p. (MLRA 10:4)

(Testing machines)

SOBOLEV, N.D., BORISOV, S.V.

Attachment to a tensile machine for tests at hight temperatures and in a vacuum. Zav.lab. 26 no.7:877-879 '60. (MIRA 13:7)

1. Moskovskiy inzhenerno-fizicheskiy institut.
(Testing machines)

BORISOV, S.V., inzhener; RAGULIN, G.I., inzhener.

High-pressure mercury lamps with corrected chromaticity. Svetotakhnika 3 no.2:1-4 F '57. (MLRA 10:3)

1. Moskovskiy elektrolampovyy zavod.
(Electric lighting, Mercury-vapor)

SOV/70-3-1-17/26

AUTHORS: Borisov, S.V., Pavlov, P.V. and Belov, N.V.

TITLE: A Graphical Method for Solving the Fundamental Harker-Kasper Inequalities (Graficheskiy metod resheniya osnovnykh neravenstv Kharkera-Kaspera)

PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 1, pp 90-92 (USSR)

ABSTRACT: The most powerful inequality relating the absolute unitary structure amplitudes is:

$$(U_H \pm U_K)^2 \leq (1 \pm U_{H+K})(1 \pm U_{H-K}) \quad .$$

This leads to a relationship between the signs of $S_{H+K} = S_H \cdot S_K$ and $S_{H-K} = S_H \cdot S_K$. The examination of all quartets of reflections is a long process and can be facilitated by suitable graphs. If $(U_H \pm U_K)$ is denoted by Σ and $(1 \pm U_{H+K})$ and $(1 \pm U_{H-K})$ by x and y , respectively, then the inequality is $\Sigma^2 \leqslant xy$ which takes the form of hyperbolae for the case of equivalence. Lines of constant Σ are drawn out on two graphs (each with U_{H-K} as abscissae and U_{H+K} as ordinates) one with values of Σ greater than 1 and

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the other with values less than 1 . The graphs are then divided into four regions: a) where $S_{H-K} = S_H \cdot S_K$ obtains; b) where $S_{H+K} = S_H \cdot S_K$ obtains; c) where neither obtains and ab) where both are true. These can be overlaid with weighted reciprocal nets. It can be seen that the most effective inequalities will be obtained when three of the amplitudes selected are large and the fourth small. For values of Σ near to 1 the inequalities will also be effective, for a pair U_{H+K} and U_{H-K} of the order of 0.15 to 0.20. There are 3 figures and 7 references, 5 of which are Soviet and 2 English.

SOV/70-3-1-17/26

A Graphical Method for Solving the Fundamental Harker-Kasper Inequalities

ASSOCIATION: Institut kristallografii AN SSSR
(Institute of Crystallography of the Ac.Sc.USSR)

SUBMITTED: November 25, 1957

Card 3/3

70-3-3-2/36

AUTHORS: Borisov, S.V., Golovachev, V.P. and Belov, N.V.

TITLE: On the Arbitrary Allocation of Signs in Direct Methods of Determining Crystal Structures (O proizvol'no zadavayemykh znakakh pri pryamykh sposobakh rasshifrovki kristallicheskikh struktur)

PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 3, pp 269 - 276 (USSR)

ABSTRACT: The limiting conditions on the arbitrarily allocated signs of three-structure amplitudes which are connected with the use of the direct methods of analysis are worked out and tabulated for all symmetries except inversion. The equivalent groups of centres of symmetry are listed for the seven crystal systems with lattices of the P, C, I and F types and under the headings of the Bravais lattices, the equivalent centres for the tabulated forms of the structure factors, the groupings of the different classes of reflections, the number of arbitrarily assignable signs and the types of reflections for which it is not permissible to allocate signs arbitrarily are tabulated. The same types of information are also given for the plane groups. Such data is not available elsewhere in organised form. There are 6 figures, 3 tables and 8 references,
Cardl/2 1 of which is Soviet and 7 English.

70-3-3-2/36

On the Arbitrary Allocation of Signs in Direct Methods of Determining Crystal Structures

ASSOCIATION: Institut kristallografii AN SSSR
(Institute of Crystallography, Ac.Sc. USSR)

SUBMITTED: March 14, 1958.

Card 2/2

AUTHORS: Borisov, S.V. and Golovachev, V.P. 70-3-3-31/36

TITLE: On Making More Precise Measurements of the Effective Camera Radius in X-ray Diffraction Photographs (Ob utochnenii radiusa kamery po rentgenogrammam)

PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 3, pp 384 - 385 (USSR).

ABSTRACT: Successive orders of the same reflection or the same reflection with several wavelengths are used in this method. The ratio between the sines of the true Bragg angles is then a simple fraction or the ratio of the wavelengths. If the radius of the cassette is in doubt then the constant of proportionality for Θ is not known exactly. If $c = 90/\pi R$ and $c_0 = c(1 + h)$ then $\sin(1 + h)\vartheta_1 = k \sin(1 + h)\vartheta_2$ which can be solved for c_0. An analogous equation is given for a plane cassette. A diagram is given to show how the equations can be solved graphically. The method requires no special arrangements but its accuracy does not exceed that of any other method (asymmetric film, internal standard substance, etc.), being about 1%.
There is 1 figure.

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70-3-3-31/36

On Making More Precise Measurements of the Effective Camera Radius in X-ray Diffraction Photographs

ASSOCIATION: Gor'kovskiy gosudarstvennyy universitet (Gor'kiy State University)

SUBMITTED: February 14, 1958

Card 2/2

ILYUKHIN, V.V.; BORISOV, S.V.

Quantitative evaluations of the maximums of the three-dimensional Paterson function. Zhur. strukt. khim. 1 no.1:80-85 My-Je '60. (MIRA 13:8)

1. Institut kristallografii AN SSSR i Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR.
(Crystallography, Mathematical)

18.8200 2808, 1454, 1416

21.1300 (1138, 1425, 1504)

S/0[illegible]/60/006/005/011
P[illegible]-201

AUTHORS: Fridman, Ya. B., Sobolev, N[illegible], Borisov, S. V. Yegorov, V. I., Konoplenko, V. P., [illegible]rozov, Ye. M. Shapovalov, L. A. and Shorr, B. F.

TITLE: Some problems of thermal strength in reactor construction

PERIODICAL: Atomnaya energiya, v. 10, no. 6, 1961, 606 - 619

TEXT: The general idea of the failure of thermal strength includes two types of fracture: the gradual (subcritical) fracture as a consequence of an extreme deformation or of a great number of cracks or of large-sized cracks; causes and manifestations of those fractures are discussed, and the loss of elastic or plastic strength on the passage through the critical state. Either type of fracture may be brought about by four causes of stress: 1, mechanical or thermal shock stresses; 2, brief static loads for some minutes or hours; 3, static loads for some months or years; 4, periodic loads. Fig. 1 presents examples in the variation of elastic and plastic conditions in a tube, and a fictitious elastic tension is shown to arise in the plastic zone (dashed line), while the forms of mechanical

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and thermal stress are intercompared in Fig. 4. Creep arises in nonuniformly heated structural elements, and cracks appear as a consequence of plastic deformation, particularly with materials having a low plasticity at room temperature. For calculating the creeping process the assumption is made on the basis of the creep theory that there is a functional relationship between the rate of creep v_i, the instantaneous stress σ_i, the temperature T, the time τ, and the plastic deformation P, namely, $v_i = v_{i_*}\left(\frac{P}{P_*}\right)^{-\alpha}$. Here, $P = \int_0^\tau v_i d\tau$; $v_{i_*} = f_*(\sigma_i, T)$; $P_* = f_*(\sigma_i, T)$. The thermal fatigue fracture has much in common with the mechanical one. It can be therefore determined from the known mechanical properties of a material. Whereas, however, the thermal fracture appears already after 10^3-10^4 cycles, the mechanical one takes 10^7-10^8 cycles to appear. A characteristic feature of the thermal fracture is the local deformation in zones with a particularly large temperature difference also in homogeneous fields of stress. This is also related to the appearance of high microstresses (Table 3). For sudden thermal shocks the temperature jump giving rise to a brittle fracture may

Some problems of thermal strength ...

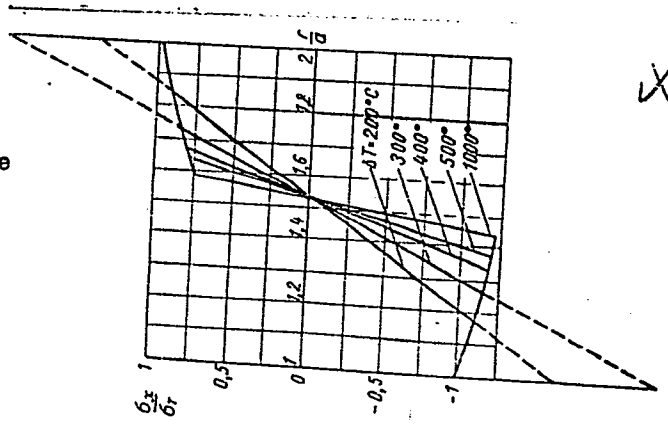
be estimated by an equation. Of importance in the practice, however, is the creep character and the durability of the material under combined mechanical and nonsteady thermal loads. Experimental results are illustrated in Fig. 9, where the curves of variation of length-versus-time (scale 400:1) are compared with the cyclic temperature curve II and the thermal and elastic deformation III. As opposed to combined stress conditions, in which the strain-stress characteristic concerned is worsened with increased temperatures, stresses in case of a purely thermal stress are of a thermal origin and lead to bulging of structural elements in the hot zones, without, however, causing their breakdown. The micromechanical properties were checked in two ways. The principle of the second is illustrated in Fig. 13, while the results of the former - for static elongations and at 1400 - 1500°C in vacuum or in a controlled atmosphere, are presented in Fig. 12. In Fig. 13, 1 denotes the sample with a cross section of 2 X 1 or 3 X 1 mm, that is placed in a groove milled out from block 2. The pressure is yielded by stamp 3 made of tungsten briquettes 4. The resulting breakdown is indicated over contact 7. There are 13 figures, 3 tables, and 39 references: 27 Soviet-bloc and 12 non-Soviet-bloc. The three most recent references to English-language publications

Card 3/9

Some problems of thermal strength ...

read as follows: Fracture, New York, Wiley and Sons, 1959; E. Sternbery, I. Chakravorty, Quart. Appl. Math., 17, no. 2, 205 (1959); E. Glenny et al. J. Inst. Metals, May (1959).

SUBMITTED: September 19, 1960



Legend to Fig. 1: Distribution of axial stresses and enlargement of the plastic zone in a thick-walled tube with various temperature jumps: r - radius of an arbitrary point; a - inner radius

Card 4/9

BORISOV, S.V.; BELOV, N.V., akademik

Crystalline structure of simpsonite $Al_4Ta_3O_{13}(F, OH)$. Dokl. AN SSSR 147 no.3:683-686 N '62. (MIRA 15:12)
(Simpsonite)

ILYUKHIN, V.V.; BORISOV, S.V.

Quantitative evaluation of the maximums of the two-dimensional Paterson function (method of integral characteristics). Zhur. strukt.khim. 4 no.4:602-609 Jl-Ag '63. (MIRA 16:9)

1. Institut kristallografii AN SSSR i Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR, Novosibirsk.
(Crystallography, Mathematical)

BORISOV, S.V.; KLEVTSOVA, R.F.

Crystal structure of TR-Sr-apatite. Zhur.strukt.khim. 4 no.4:629-631 Jl-Ag '63. (MIRA 16:9)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR, Novosibirsk.
(Apatite) (Strontium) (Rare earths) (Crystallography)

ACCESSION NR: AP4039392 S/0070/64/009/003/0330/0334

AUTHORS: Brusentsev, F. A.; Borisov, S. V.

TITLE: Discrimination of crystal structure from a set of Patterson peaks by means of a computer

SOURCE: Kristallografiya, v. 9, no. 3, 1964, 330-334

TOPIC TAGS: computer programming, crystal structure, Patterson function, simpsonite

ABSTRACT: One of the principal tasks in deciphering the Patterson function is a solution of the problem concerning the distribution of N atoms for M possible sites (M > N) by peaks of the Patterson function or by maxima when minimizing the function. The authors propose a program that offers a very simple approach to the solution of this problem, permitting a check on unnecessary peaks by means of comparing the divergence factors. This simplification, which greatly facilitates and accelerates programming, does not permit determination of some other structural properties, such as symmetry. The procedure involves: computation of the divergence factor R successively for M structural variants with n known atoms, choosing one of these with a minimal value of divergence. The coordinates of the peak corresponding to

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ACCESSION NR: AP4039392

this variant apply to the (n+1)st atom. Considering that the structure now consists of (n+1) atoms, one seeks the (n+2)nd atom. In this procedure, R may be computed either from all M peaks or only from the remaining (M-1) peaks. The procedure is continued till the positions of all (M-n) atoms of the given structure are defined. It is noted that (in setting up the program) a definite number of unknown kinds of atoms and a definite number of unknown atoms of each kind are assumed. The kind of atom is determined by its atomic number. The divergence factor may be written for only selected atoms, for only those atoms having a value of R that differs by no more than some predetermined value needed for the solution, or for all atoms. The latter two are useful when the R factors for different peaks are nearly the same and when the computer, because of experimental errors, may select the wrong peaks. A program was set up to test this procedure for the structure of simpsonite and gave good results. Orig. art. has: 1 table and 2 formulas.

ASSOCIATION: Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR (Institute of Inorganic Chemistry, Siberian Department, AN SSSR)

SUBMITTED: 21Jun63 ENCL: 00

SUB CODE: SS, DP NO REF SOV: 008 OTHER: 005

Card 2/2

BORISOV, S.V.; BRUSENTSEV, F.A.; KLEVTSOVA, R.F.; BELOV, N.V., akademik

Crystal structure of creedite $Ca_3Al_2(F,OH)_{10}SO_4 \cdot 2H_2O$. Dokl. AN SSSR 155 no. 5:1082-1084 Ap '64. (MIRA 17:5)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR.

BRUSENTSEV, F.A.; BORISOV, S.V.

Determining the crystalline structure from a set of Patterson's peaks by means of a computer. Kristallografiia 9 no.3:330-334 My-Je '64. (MIRA 17:6)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR.

BORISOV, S.V.; KLEVTSOVA, R.F.; BELOV, N.V., akademik

Crystalline texture of "uklonskovite" $NaMg[SO_4](OH)\cdot 2H_2O$.
Dokl. AN SSSR 158 no.1:116-118 S-O '64 (MIRA 17:8)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR.

L 53637-65 EWT(d)/EWT(m)/EWP(w)/EPF(c)/EWA(d)/T/EWP(t)/EWP(k)/EWP(h)/EWP(z)/EWP(b)/
EWP(1)/EWA(c) Pf-4/Pr-4 MJW/JD/HW/EM/GS

ACCESSION NR: AT5010251 UR/0000/65/000/000/0012/0014

AUTHOR: Borisov, S. V.

39
B+1

TITLE: Apparatus for creep testing at variable temperature

SOURCE: Mashiny i pribory dlya ispytaniya metallov i plastmass (Machines and instruments for testing metals and plastics); sbornik statey. Moscow, Izd-vo Mashinostroyeniye, 1965, 12-14

TOPIC TAGS: creep characteristic, creep mechanism, material testing, temperature, temperature test, RD 09 electromotor, EI852 steel

ABSTRACT: A special device was created for performing reliable experiments in plastic deformation under static loading with variable temperature. The device (see Fig. 1 on the Enclosure) allows tensile strain loading of the specimen while the specimen simultaneously undergoes cyclic variation of temperature. The amount of plastic deformation is noted at the end of each temperature cycle. Specimens are in the form of thin-walled tubes with head nodes. The working part of the specimen wall is 0.5 mm in thickness. Heating and cooling of the specimens are done by means of an electric current and air respectively. An HD-09 electromotor, capable of producing two strain speeds (2 and 100 mm/min), is used with the device.

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L 53637-65

ACCESSION NR: AT5010251

Also featured is a recording device which plots changes in specimen length with temperature and cycle number. The results of creep testing EI852 steel are given. Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 15Dec64 ENCL: 01 SUB CODE: AS,IE

NO REF SOV: 000 OTHER: 000

Card 2/3

L 53637-65
ACCESSION NR: AT5010251

ENCLOSURE: 01

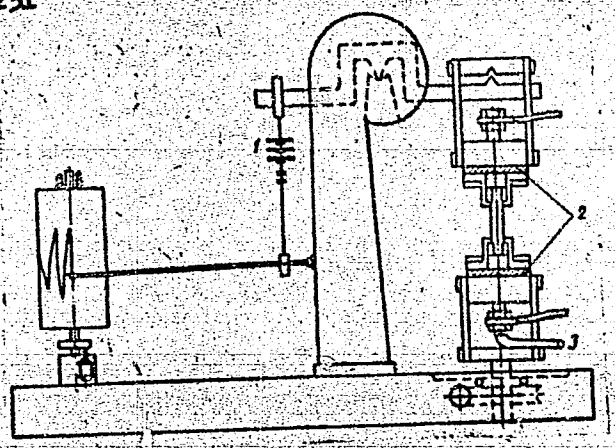

Fig. 1. Principal diagram of the device

1- weights; 2- electric insulation; 3- air

Card 3/3

BRUSENTSEV, F.A.; BORISOV, S.V.; KLEVTSOVA, R.F.

Defining more accurately the crystalline structure of creedite $Ca_3Al_2(F,OH)_{10}SO_4 \cdot 2H_2O$. Zhur. strukt. khim. 6 no. 4:567-570 Jl-Ag '65 (MIRA 19:1)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR, g. Novosibirsk. Submitted June 22, 1964.

BAKAKIN, V.V.; GAGARINSKIY, Yu.V.; BORISOV, S.V.; ZAKHAROVSKIY, G.M.; DURASOVA, S.A.

Certain crystal chemical features of hydrated uranium tetrafluoride of cubical form. Zhur. strukt. khim. 6 no. 4:562-566 Jl-Ag '65 (MIRA 19:1)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR, g. Novosibirsk. Submitted August 24, 1964.

BORISOV, S.V.; ERGSENTSEV, F.A.

More accurate definition of the structure of "uklonskovit".
Zhur.strukt.khim. 6 no.5:788-790 S-O '65.
(MIRA 18:12)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR, g. Novosibirsk. Submitted April 24, 1965.

L 06074-67

ACC NR: AP6019023 (N) SOURCE CODE: UR/0032/66/032/001/0089/0091

AUTHORS: Borisov, S. V.; Yakovlev, V. V.

65
B

ORG: Moscow Engineering Physics Institute (Moskovskiy inzhenerno-fizicheskiy institut)

TITLE: A method for estimating the plasticity and strength of low-plasticity materials

SOURCE: Zavodskaya laboratoriya, v. 32, no. 1, 1966, 89-91

TOPIC TAGS: plasticity, compressive strength, alloy, cast iron, beryllium, graphite, plastic, hydraulic device, hydrostatic pressure / V96 alloy

ABSTRACT: A method of estimating the plasticity and strength of low-plasticity materials is proposed. The method was developed because, as a rule, the estimates of mechanical properties from tensile tests cannot be applied to low-plasticity materials. The method is based on indentation of a flat specimen with a spherical punch. The specimen is placed on a support with a depression. Specimens of plastic, graphite, V96 alloy, cast iron, and beryllium were tested. The breaking loads of these materials were 3000, 700, 20 000, 9000--10 000, 8100, and 9200 kg, respectively. The testing creates stressed-state zones: soft (hydrostatic stress) in the upper part, and hard (plane deformation) in the lower part. Analysis of the test results

Card 1/2 UDC: 620.17

L 05074-67

ACC NR: AP6019023

should take into account that, for materials similar in strength, breakings with a larger hole correspond to higher plasticity. Orig. art. has: 1 formula, 1 table, 2 diagrams, and 1 photograph.

SUB CODE: 11,20/ SUBM DATE: none/ ORIG REF: 001

Card 2/2

ACC NR: AP6037035 SOURCE CODE: UR/0085/66/000/012/0026/0027

AUTHOR: Borisov, T.

ORG: none

TITLE: Space probes of life on Mars

SOURCE: Kryl'ya rodiny, no. 12, 1966, 26-27

TOPIC TAGS: Mars planet, soft landing spacecraft, space probe, space biology, spacecraft, space research facility/Mars 1, Mariner 4 spaceship, Voyager spaceship

ABSTRACT: Based on past and current scientific research, the possibility is discussed of the existence of various forms of life on Mars, and of the probable future discoveries by space probes now planned. Achievements are discussed of "Mars 1", "Mariner-4", and present work being carried out in connection with an automatic biological laboratory for finding life on Mars, which is to be installed on the "Voyager" spaceship to effect a soft landing on Mars in the seventies. The utility of the research planned and the various means of ascertaining the presence of microbiology are analyzed. Orig. art. has: 1 figure. [GC]

Card 1/1 SUB CODE: 03,06,22/SUBM DATE: none/

ACC NR: AN7003470 SOURCE CODE: UR/9025/67/000/025/0003/0003

AUTHOR: Borisov, T. (Engineer, Scientific reviewer for Trud)

ORG: none

TITLE: Haste fatal to American cosmonauts

SOURCE: Trud, no. 25, 29 Jan 67, p. 3, cols. 2-4

TOPIC TAGS: space test, manned spacecraft

ABSTRACT: The tragedy at Cape Kennedy is not the first case of the death of US cosmonauts during training. On 31 October 1964, while flying a training craft, Cosmonaut Freeman was killed, and on 28 February 1966, while having some trouble with their training aircraft, Bassett and Lee also perished. These three cosmonauts became victims of pure chance, and their deaths were not connected with space equipment. Cosmonauts Grissom, White, and Chaffee perished as a result of a breakdown in the space equipment. For the time being, it can only be definitely said that the tragedy is far from being a question of pure chance. The cosmonauts became victims of a space race created by the directors of the US space program. Even during the Mercury flights a very large number of dangerous technical malfunctions occurred. After the flight of four spacecraft, NASA published a report in which it stated that the firms that took part in project

Card 1/2 UDC: none

ACC NR: AN7003470

Mercury often delivered faulty equipment. The Gemini flights in 1965 and 1966 were conducted in even greater haste. In addition, the number of malfunctions increased, and they were often very serious in nature. The American cosmonauts should be praised, because more than once they successfully came out of very difficult situations, when danger was knocking on the walls of the spacecraft. Recently, the hurry and haste connected with flights has continued to grow. This is because the moon has become attainable. After all, the ship in which the American cosmonauts perished is a replica of that which is to take them to the moon before the end of this decade. After quoting the Associated Press concerning the delay in the Apollo program, the author writes that there are enough dangers in space without the USA space directors adding to them.

SUB CODE: 22/ SUBM DATE: none/ ATD PRESS: 5112

Card 2/2

MIKHAYLOV, G.P.; BORISOV, T.I.; DMITROCHENKO, D.A.

Relaxation dielectric losses in polymethylmethacrylate.
Zhur. tekh. fiz. 26 no.9:1924-1928 S '56. (MLRA 9:11)

1. Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR, Leningrad.
(Methacrylic acid) (Plexiglas--Electric properties)

BORISOV, T.N.

Enforce the inspection of end switches in cranes. Bezop.truda v prom. 2 no.5:18-19 My '58. (MIRA 11:4)
(Electric cranes)

BORISOV, T.N., inzh.

Intercrystalline breakdown of metal of low-power steam boilers.
Bezop.truda v prom. 6 no.2:17-18 F '62. (MIRA 15:2)
(Boilers)
(Corrosion and anti-corrosives)

BORISOV, U.

Reserves move into the fields. Prof.-tekh. obr. 20 no.4:9-10 Ap '63. (MIRA 16:5)
(Kharkov Province--Farm mechanization--Study and teaching)

KUDRA, G.; BORISOV, U.

Machine operators master new machinery and progressive technology. Prof.-tekh. obr. 22 no.3:10-11 Mr '65. (MIRA 18:7)

BORISOV, U.

Heirs of battle glory. Prof.-tekh.obr. 22 no.5:17 My '65.
(MIRA 18:5)

SAFONOV, Ivan Stepanovich, zasluzhennyy uchitel' professional'no-tekhnicheskogo obrazovaniya RSFSR; BORISOV, U.; DEMENT'YEV, M.

Enthusiasm and exactingness; thoughts about our work. Prof.-tekh. obr. 22 no.9:11-14 S '65. (MIRA 18:9)

1. Master professional'no-tekhnicheskogo uchilishcha No.3, Voronezh (for Dement'yev).

BORISOV, V.

Toward the highest living standard in the world. Okhr. truda i sots. strakh. 4 no.10:1-4 O '61. (MIRA 14:12)

1. Zaveduyushchiy otdelom Vsesoyuznogo tsentral'nogo soveta professional'nykh soyuzov po gosudarstvennomu sotsial'nomu strakhovaniyu.
(Cost and standard of living)

BORISOV, V.

Let's improve the work of social insurance. Okhr. truda i sots. strakh. 5 no.7:1-3 Jl '62. (MIRA 15:7)

1. Zaveduyushchiy otdelom Vsesoyuznogo tsentral'novo soveta professional'nykh soyuzov.
(INSURANCE, SOCIAL)
(LABOR AND LABORING CLASSES--MEDICAL CARE)

BORISOV, V.

Improved automatic device for filling cans. Mias. ind. SSSR 31 no.4:13-14 '60. (MIRA 14:7)

1. Rizhskiy zavod "Kompressor".
(Meat, Canned)

BORISOV, V.

The capital of the third all-union coal basin. Mast.ugl. 2 no.10:16a-d O '53. (MLRA 6:10) (Karaganda)

BORISOV, V.

Protective casing on a winch drum. Mast.ugl. 6 no.10:13-14 O '57. (MIRA 10:12)

(Winches)

BORISOV, V.

Let's improve work on the fulfillment of export orders. Vnesh. torg. 41 no. 2:27-29 '61. (MIRA 14:2)

1. Nachal'nik Upravleniya vneshnikh snosheniy Mosgorsovnarkhoza.
(Moscow--Industries) (Russia--Commerce)

BORISOV, V.

Participate in the building of lightning arresters. IUn.tekh. 5 no.4:2-5 Ap '61. (MIRA 14:3)
(Lightning protection)

BORISOV, V.

The engine, clutch, and transmission in models. Politekh.obuch. no.12:79-84 D '57. (MIRA 10:12)
(Gas and oil engines) (Clutches (Machinery))
(Automobiles--Transmission devices)

BORISOV, Vl., inzh.

From the ancient pinions to the Novikov worm gears. Nauka i tekh z mladezh 13 no.11:6-8 N '61.

BORISOV, V., inzh.

Alkaline starter batteries for the GAZ-51 motortrucks. Avt. transp. 37 no.2:41-42 F '59. (MIRA 13:1)

1.Gor'kovskiy avtomobil'nyy zavod.
(Motortrucks--Batteries)

BORISOV, V., inzh.

Assembly for a centralized feeding of lubricating oil. Khol.tekh. 37 no.5:53 S-O '60. (MIRA 13:10)
(Refrigeration and refrigerating machinery)
(Lubrication and lubricants)

BORISOV, V.

BORISOV, V.

Urbakh-Astrakhan petroleum pipeline. Neftianik 2 no.8:33 Ag '57.
(MIRA 10:10)

(Petroleum--Pipelines)

BORISOV, V.

"Doroga k zvezdam" (The road to the stars), Znanie-Sila,
Vol. 25, No. 4, April, 1950, pp. 7-8
For translation, see Appendix I.

900302-V

Rand RM-1760 trans. 21 June 56 – in library #1

SOV/25-59-4-32/44

AUTHOR: Borisov, V., Nikolayev, A.

TITLE: An Underwater Ejection Seat (Katapul'ta pod vodoy)

PERIODICAL: Nauka i zhizn', 1959, Nr 4, p 69 (USSR)

ABSTRACT: The author describes experiments carried out in the USA and England with underwater ejection seats.

Card 1/1

GORLOV, O.; BORISOV, V.; KOROTKYEV, N.I., red.; ATROSHCHENKO, L.Ye., tekhn.red.

[Animals in space] Zhivotnye v kosmose. Moskva, Izd-vo "Znanie," 1960. 47 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.7, Bibliotechka sel'skogo lektora, no.19). (MIRA 14:2)

(SPACE BIOLOGY)

GORLOV, O.; BORISOV, V.;KOROTEYEV, N.I., red.; SAVCHENKO, Ye.V., tekhn. red.

[Animals in outer space] Zhivotnye v kosmose. Moskva, Izd-vo "Znanie," 1960. 93 p. (MIRA 15:3)
(Space sciences) (Animals—Habits and behavior of)

BORISOV, V.; GORLOV, O.; POZHIDAYEVA, M.G., red.; ARZUMANOVA, N.A., red.; KLYUCHEVA, T.D., tekhn. red.

[Life and outer space] Zhizn' i kosmos. Moskva, Izd-vo "Sovetskaia Rossiia," 1961. 195 p. (MIRA 15:2)
(Space science)

BORISOV, V.; GEORGIYEV, O.

Beyond the limits of the atmosphere. Nauka i zhizn' 28 no.8:48-50 Ag '61. (MIRA 14:8)

(SPACE MEDICINE)

BORISOV, V., nauchnyy sotrudnik; SERGEYEV, A., nauchnyy sotrudnik

Biosphere of a space ship cabin. Nauka i zhizn' 29 no.5:39-41 My '62. (MIRA 15:11)

1. Akademiya nauk SSSR.

(Space biology)

BORISOV, Vladimir; LANINA, L.I., red.; NAZAROVA, A.S., tekhn. red.

[Radio echo in the outer space]Radioekho v kosmose. Moskva, Izd-vo "Znanie," 1963. 29 p. (Novoe v zhizni, nauke, tekhnike, X Seriia: Molodezhnaia, no.6) (MIRA 16:4)
(Radio astronomy) (Space ships) (Artificial satellites)

BORISOV, Vladimir; SHUSTOVA, I.B., red.; ATROSHCHENKO, L.Ye., tekhn. red.

[The riddle of gravitation] Zagadka tiagoteniia. Moskva, Izd-vo "Znanie," 1963. 36 p. (Narodnyi universitet kul'tury: Estestvennonauchnyi fakul'tet, no.10) (MIRA 16:10)
(Gravitation)

BORISOV, V., starshiy inzh.

Great responsibility. Stroitel' 9 no.10:30 O '63. (MIRA 16:11)

BORISOV, V.

Fourteenth anniversary of the treaty with Italy. Vnesh.torg. 42 no.12:21-22 '62. (MIRA 15:12)
(Russia—Commerce—Italy)
(Italy—Commerce—Russia)

BORISOV, Viktor; PLESKACHEVSKIY, Mikhail

Trade-union council and regional economic council. Sov. profsoiuzy 18 no.3:14-16 F '62. (MIRA 15:3)

1. Spetsial'nyy korrespondent zhurnala "Sovetskiye profsoyuzy" (for Borisov). 2. Sobstvennyy korrespondent gazety "Trud" (for Pleskachevskiy).
(Azerbaijan--Efficiency, Industrial) (Azerbaijan--Trade unions)

BORISOV, V.

Use the people's funds in a businesslike manner. Sov. profsoiuzy 18 no.6:22-23 Mr '62. (MIRA 15:3)

1. Zaveduyushchiy otdelom Vsesoyuznogo tsentral'nogo soveta professional'nykh soyuzov po gosudarstvennomu sotsial'nomu strakhovaniyu.
(Insurance, Social) (Trade unions)

BORISOV, V.A.

Designing radio-receiver input circuits with a frequency dependent resistor. Elektrosviaz' 12 no.11:29-35 N '58. (MIRA 11:11)
(Radio receivers and reception)

BORISOV, V.A.

Case of free bone transplantation in femoral pseudo-arthrosis with extensive bone defect. Vest. khir. 71 no.3:59 1951. (CIML 20:11)

1. Of the Clinic of Hospital Therapy, Naval Medical Academy.

BORISOV, V.A.

BORISOV, V.A. (Leningrad, Krasnoputilovskaya ul., d.9, kv.32)

Primary suture of tendons in infected gunshot wounds; experimental study [with summary in English on pp.159-160]. Vest.khir. 79 no.10: 109-114 O '57. (MIRA 10:12)

1. Iz gospital'noy khirurgicheskoy kliniki No.2 (zav. - prof. Ye.V. Smirnov) Voyenno-meditsinskoy ordena Lenina akademii im. S.M.Kirova.
(WOUNDS AND INJURIES, experimental
surg., primary suture of tendons in infected gunshot wds. in dogs (Rus))

ARAKELOV, A.S.; BORISOV, V.A.; GAL'PERIN, I.I.; GUREVICH, A.G.; DOVZHUK, G.T.; PARSHIN, R.N.; SOKOLOVSKIY, S.M.; SELIKHOV, V.L., SHIFRIN, D.L.; ETKIN, M.V.; GET'YE, V.A., red.toma; YELIN, V.I., red.toma; SOLDATOV, K.N., red.toma; SVYATITSKAYA, K.P., vedushchiy red.; TROFIMOV, A.V., tekhn.red.

[Equipment used in the petroleum industry] Neftianoe oborudovanie; v shesti tomakh. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry. Vol.1. [Compressors and pumps] Kompressory i nasosy. 1958. 234 p. (MIRA 12:5)
(Petroleum industry--Equipment and supplies)
(Pumping machinery) (Compressors)

BORISOV, V. A.

5(0)

AUTHORS: Mashovets, V. P., Ponomareva, A. M. SOV/153-2-2-31/31

TITLE: Chronicle. All-Union Competition for the Best Students-paper Concerning Chemistry and Chemical Technology for the Scholastic Year 1957-1958 (Khronika. Vsesoyusnyy konkurs na luchshuyu studencheskuyu rabotu po khimii i khimicheskoy tekhnologii za 1957-1958 uchebnyy god)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 2, pp 303-304 (USSR)

ABSTRACT: The Ministerstvo vysshego obrazovaniya SSSR (Ministry for University-education of the USSR) carried out the competition mentioned in the title, within the framework of the Studencheskiye nauchnyye obshchestva (Scientific Student Societies) covering 37 subjects of science, technology, arts, and culture. The Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet) was entrusted with the subject "Chemistry and Chemical Technology". A commission was formed consisting of Professor V. B. Aleskovskiy, V. P. Mashovets (Chairman), I. P. Mukhlenov, A. A. Petrov, B. A. Poray-Koshits, Docent P. A. Yablonskiy, and Candidate of Chemical Sciences

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A. M. Ponomareva (Secretary). The following persons acted as critics: The Professors A. F. Alabyshev, A. M. Ginstling, I. S. Ioffe, M. I. Knyagininchev, L. Ye. Kresnev, A. B. Kusov, A. M. Malkov, I. N. Maslenitskiy, K. P. Mishchenko, Yu. V. Morachevskiy, with the collaborators, N. N. Nepenin, Yu. K. Novodranov, V. V. Perekalin, A. L. Rotinyan, A. V. Natalkin, A. V. Storonkin, and T. A. Favorskaya with collaborators, A. M. Khaletskiy; Docents: A. Ye. Akin, L. N. Batuner, M. I. Gil'dengershel', O. F. Ginzburg, I. A. D'yakonov, S. G. Zhavoronok, S. N. Zhilov, Ye. S. Roskin, P. N. Sokolov, N. P. Starostenko, M. M. Sychev, A. T. Trubchenko; Chief scientific researcher B. F. Ioffe; Candidates of Sciences: G. A. Bel'chenko, M. K. Bynyayeva, O. N. Setkina, B. P. Yur'yev; Engineers: Kostyreva, Senyusheva, and Yarmolinskiy. The paper "Synthesis and Self-oxidation of the p-Di-Secondary Butyl-benzene" by V. S. Zavgorodniy, Fifth-year student of the Voronezhskiy gosudarstvennyy universitet (Voronezh State University) was awarded a medal for being the best. The second candidate for the medal is the

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Fifth-year-student of the Kiyevskiy gosudarstvennyy universitet (Kiyev State University) K. F. Lyashev. He submitted the paper "Kinetics of the Non-stationary Catalytic Decomposition-process of Hydrogen-peroxide on Platinum". The third medal was awarded to the Fourth-year-students of the Ivanovskiy khimiko-tekhnologicheskiy institut (Ivanovo Chemical-technological Institute): D. V. Nebova, A. I. Sotnikova, T. T. Simagina, and R. M. Sutyagina for the paper: "Method of Continuous Regeneration of Zinc-chloride From Waste Water of the Kineshma Fibre Factory". Besides these three papers, the commission selected further 8 papers which deserve publication owing to their maturity and originality. The papers are: "Utilization of Phosphorous Gypsum for the Production of Local Construction-binding Materials" by the Fourth-year-students of the Ivanovo Institute (see above): A. V. Tochilova and A. A. Fadeyeva; "Study of the Influence of the Dispersion of Polymer Particles, When Being Disintegrated, on the Molecular Weight" by the Third-year-student of the Moskovskiy

Card 3/5

Chronicle. All-Union Competition for the Best Students-paper Concerning Chemistry and Chemical Technology for the Scholastic Year 1957-1958

SOV/153-2-2-31/31

tekhnologicheskiy institut legkoy promyshlennosti (Moscow Technological Institute for Light Industry) V. N. Gorodilov; "Study of the Cathodical Polarization at the Precipitation of Chromium From Sulphide-solutions" by the Fifth-year-student of the Ural'skiy politekhnicheskiy institut (Ural Polytechnical Institute) V. G. Petropavlovskiy; "Gold Extraction From Watery Cyanide-solutions" by the Fifth-year students of the Moskovskiy khimiko-tekhnologicheskiy institut imeni D. I. Mendeleyeva (Moscow Chemical-technological Institute imeni D. I. Mendeleyev) A. V. Ochkin, V. A. Borisov, and M. Brak; "Some Investigations of the Vulcanisates of Rubbers Containing Carboxyl" by the Fourth-year-students of the Yaroslavskiy tekhnologicheskiy institut (Yaroslavl' Technological Institute) G. I. Komarova and T. A. Shchadricheva; "Investigation of the Cathodic and Anodic Processes at Gold-plating" by the Fifth-year-student of the Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institute imeni Lensovet) R. A. Nosova; "Spectral Determination of Molybdenum and Tungsten in Tri-hetero-polyacids" by the Third-year-student of the Kishinevskiy gosudarstvennyy universitet (Kishinev State University) V. A. Dagayev; "Capture of Dichlorine-ethane by Bone-fat in Foam-condition" by the Fourth-year-students of the Kazanskiy khimiko-tekhnologicheskiy institut (Kazan' Chemical-technological Institute) L. I. Tashina, R. A. Nurutdinov, and T. G. Siraznev. Taken collectively, the competition has shown a high standard of the scientific research work in the circles of the Studencheskoye Nauchnoye obshchestvo (Scientific-student.-societies) of many universities.

Card 4/5

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206410001-7"

S/032/60/026/012/027/036
B020/B056

AUTHORS: Glazov, V. M. and Borisov, V. A.

TITLE: A Device for the Automatic Loading of the Specimen in Measuring Microhardness

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 12, pp. 1420-1422

TEXT: The authors constructed and manufactured a simple device to the apparatus ПМТ-3 (PMT-3), which warrants the uniform reduction or increase of the diamond pyramid during an exactly determined time when loading or unloading the specimen. Fig. 1 shows the apparatus PMT-3 with the device mentioned. On the main stay of the apparatus, a bracket is fastened, to which, in turn, a controllable motor with a reducer is fitted. The transmission of the rotatory motion from the reducer to the indentor is brought about with the aid of a belt transmission; on the axes of the indentor and of the reducer two special gears are fitted (Fig. 2), which warrant the uniform transmission of the motion. The effect produced by the loading method upon the spread of the results during microhardness tests was studied

A Device for the Automatic Loading of the Specimen in Measuring Microhardness

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B020/B056

on pure aluminum of the type AB-0000 (AV-0000) (99.998% Al). The measured results were statistically evaluated; from these data, the diagrams were drawn (Fig. 3). In automatic loading, the spread of data is much less than in the case of manual loading. The table gives the results of comparative studies, which were carried out on the same aluminum single crystals in the case of manual and automatic loading, using different loads, beginning from 0.5 g. B. Ya. Petrenko is mentioned. There are 3 figures, 1 table, and 2 Soviet references.

ASSOCIATION: Institut metallurgii im. A. A. Baykova Akademii nauk SSSR (Institute of Metallurgy imeni A. A. Baykov of the Academy of Sciences USSR)

Card 2/2

BORISOV, V.A.

Deformation of cotton cloth in the rolling process. Izv.vys.ucheb. zav.; tekh.tekst.prom. no.4:73-76 '58. (MIRA 11:11)

1. Moskovskiy tekstil'nyy institut.
(Cotton fabrics)

BORISOV, V.A.

Effect of stretch by the picking machine lap winder on linen evenness. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.6:35-42 '58. (MIRA 12:4)

1. Moskovskiy tekstil'nyy institut.
(Textile machinery) (Linen)

BORISOV, V.A.

Methods of breaking down the lap unevenness into components. Tekst.-prom. 21 no.5:38-42 My '61. (MIRA 15:1)
(Spinning)

VINICHENKO, N.N.; BORISOV, V.A.; KASHIK, S.A.; PANAYEV, V.A.

Facies conditions governing the formation of Jurassic sediments in the Irkutsk Coal Basin. Trudy Inst. zem. kory SO AN SSSR no.15:81-91 '63 (MIRA 17:3)

BORISOV, V.A.; ROZANOV, A.Yu.

New data on the biostratigraphy of ancient formations in the Bateni Range. Dokl. AN SSSR 158 no.2:342-344 S '64.

(MIRA 17:10)

1. Geologicheskiy institut AN SSSR i Krasnoyarskoye geologicheskoye upravleniye. Predstavleno akademikom D.V.Nalivkinym.

BORISOV, V.A.

Features of an automatic control system containing links with invariant action. Izv. vys. ucheb. zav.; elektromekh. 7 no.6: 724-729 '64. (MIRA 17:7)

L 17560-65 EWG(j)/EWT(m)/EPF(c)/EPF(n)-2/EPR/EWP(j)/T/EWA(h)/EWA(l) Pc-4/ Pr-4/Ps-4/Peb/Pu-4 CG/RM

ACCESSION NR: AP4049784 S/0138/64/000/011/0028/0033

AUTHOR: Kaplunov, M. Ya.; Khozak, V. K.; Kozlov, V. T.; Sobolev, V. S.; Tarasova, Z. N.; Borisov, V. A.; Karpov, V. L.; Dogadkin, B. A.

TITLE: Thermoradiation vulcanization of tires

SOURCE: Kauchuk i rezina, no. 11, 1964, 28-33

TOPIC TAGS: thermoradiation vulcanization, rubber structure, sulfur vulcanization, tire wear, thermal aging

ABSTRACT: The effectiveness of the method of thermoradiation vulcanization was investigated from the point of view of increasing the quality of the tires. The radiation unit consisted of 18 spent, heat-liberating elements from an atomic reactor. The total activity amounted to 76,000 gram-equivalents of radium. Not more than six 5.60-15 tires could be treated at one time in a cylindrical vat with a hermetically closed cover. The tires had a reduced content of vulcanizing agent; one contained a sensitizer of radiation structuring-hexachlorethane. Irradiation was in an argon medium at 0.35 atm pressure. The temperature did not exceed 40C. Radiation doses amounted to 5, 9, 13, and 20 Mrad. The resulting vulcanizate had the optimum relationship of crosslinks of the type -C-C- and

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L 17560-65

ACCESSION NR: AP4049784

-C-S_x-C. The destructive processes as well as processes of oxidation and trans-isomerization were less than during sulfur and radiation vulcanization. The relative content of rubber in the "active" portion of the vulcanization network was high. The rubbers had much higher elasticity and strength, as well as increased resistance to thermal aging and wear. Accelerated road tests showed 15-20% greater wear resistance than standard tires. "The relationship between structurization and destruction was determined by A. S. Ly*kin, N. D. Stepanov, V. Ye. Lesnichiy and L. M. Dunayev (member of NIFKhI) took part in setting up the apparatus. The design of the apparatus was developed under the guidance of G. N. Lisov (member of NIFKhI). Measurements of radioactivity and dosimetry were carried out by A. G. Vasil'yev and V. Ye. Drozdova (member of NIFKhI). The TsZL MShZ took part in manufacturing the tires." Orig. art. has: 5 figures and 4 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promy*shlennosti (Scientific Research Institute for the Tire Industry); Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im. L. Ya. Karpova (Scientific Research Institute for Physics and Chemistry)

SUBMITTED: 00 ENCL: 00 SUB CODE: MT

NO REF SOV: 005 OTHER: 001

Card 2/2

BOR.SOV, V.A., inzh.

Modification of inland waterways in the Kama Basin. Rech.transp. 17 no.11:35-37 N '58. (MIRA 11:12)

1. Nachal'nik Kamskogo basseynovogo upravleniya.
(Kama Valley--Waterways)

BORISOV, V. A., Engineer Cand Tech Sci

Dissertation: "Investigation of the Performance of an Electric-Machine Amplifier with Transversal Excitation."

3/3/50

Moscow Order of Lenin Power Engineering Inst imeni V. M. Molotov.

SO Vecheryaya Moskva
Sum 71

BORISOV, V. A.

"Study of the Performance of an Electric Machine Amplifier With Transverse Excitation in Motor Operation" (Issledovaniye raboty elektromashinnogo usilitelya s Poperechnym vozhbuzhdeniyem v dvigatel'nom rezhime) Elektrichestvo, No 7, 1950.

Ivanov Power Institute.
Dissertation for Candidate's Degree

BORISOV, V. A.

PA 167T21

USSR/Electricity - Amplifiers, Electric Machine
Electric Motors
Aug 50

"Performance of Electric Machine Amplifiers in Motor Operation," V. A. Borisov, Cand Tech Sci, Ivanovo Power Eng Inst imeni Lenin

"Elektrichestvo" No 8, pp 21-27

Shows subject amplifiers can be used as motors. Gives equations for mechanical characteristics. Discusses special starting features, influence of reactive field compensation and saturation on mechanical characteristics. Describes

167T21

USSR/Electricity - Amplifiers, Electric Machine (Contd)
Aug 50

methods of regulating speed and basic properties of these amplifiers when supplied with additional windings. Analyzes transient processes.

167T21

BORISOV, V. A., Docent PA 196T31

USSR/Electricity - Servomechanisms Aug 51
Amplidynes

"The Regulation Characteristics of an Amplidyne Operating as a Motor," Docent V. A. Borisov, Cand Tech Sci, Ivanovo Power Eng Inst imeni Lenin

"Elektrichestvo" No 8, pp 58-64

Concludes that changing the current in the control winding and changing the deg of compensation are the 2 best regulation methods for the amplidyne motor. Concludes that cost and size

196T31

USSR/Electricity - Servomechanisms Aug 51
("ontd)

of amplidynes limit the field of application of this motor to powers of about 10-20 kw. Submitted 13 Dec 50.

196T31

BORISOV, V.A.

USSR/Engineering - Regulation FD-1749

Card 1/2 : Pub. 10-8/12

Author : Belyayev, I. V. (docent); Borisov, V. A. (docent); Skurikhin, V. I.; Zakharov, M. F.; Krylov, M. A. (all Candidates of Technical Sciences)

Title : Discussion on the article "Development of Automatics and Telemechanics in the Fifth Five-Year Plan"

Periodical : Avtom. i telem., Vol. 16, 203-205, Mar-Apr 1955

Abstract : In a letter by a group of scientists from the Leningrad Electrical Engineering Institute, "Development of Automatics and Telemechanics in the 5th 5-Year Plan," published in No 2, 1953, ibid., a number of important questions were posed: The serial (mass) production of typical automatic and telemeter apparatuses for industry, agriculture, and sci-resinstitutions; expansion and teaching of specialists in the planning, designing, manufacturing, and exploitation of automatic and telemeter equipment; strengthening of connection between individual institutions and other organizations concerned with automatics and telemechanics. Actively engaged at Leningrad Electrical Engineering Institute in these problems are Professors N. K. Bogoroditskiy, D. V. Vasil'yev, S. A. Rinkevich, V. I. Ivanov, and others. Special courses already formed are: Principles of telemechanics, Principles of automatization, Regulation of electric drives, Electrical power stations, networks and systems, Relay protection and automatization of electrical power systems,

FD-1749

Card 2/2

Automatization of industrial processes, electrical equipping of industrial mechanisms, Electrification of enterprises, etc.

Institution : Ivanov Electric Power Institute im. Lenin [Ivanovskiy energeticheskiy institut im. V. I. Lenina]

Submitted : -

BORISOV, V. A. - CAND Tech. Sci, Asst. Prof.

TRANSLATION M-1312, 19 Nov 1956.

BORISOV, V. A.

BORISOV, V.A., inzhener; GONCHARIK, A.P., inzhener.

Automatic lathes used in machining spinning rings. Mashinostroitel' no.5:20-21 My '57. (MLRA 10:6)

(Lathes)

SOV/106-58-11-4/12

AUTHOR: Borisov, V.A.

TITLE: The Design of Radio-Receiver Input Stages Having a Frequency-Dependent Impedance in the Tuned-Circuit (Raschet vkhodnykh tsepey radiopriyemnika s chastotno-zavisimym soprotivleniyem v konture).

PERIODICAL: Elektrosvyaz', 1958, Nr.11, pp.29-35 (USSR)

ABSTRACT: In the majority of input circuits as used in radio receivers, the damping of the circuit and hence its band-width is determined by the losses in the coil and in the aerial. This leads to a variation of bandwidth over the tuning range. The present article analyses the behaviour of a series-tuned circuit which includes a parallel combination of an auxiliary resistance and capacitance which operates as a frequency-dependent impedance whose variable damping compensates for the change in bandwidth which would otherwise occur. The essential circuit is that of Fig.1, while Fig.2 is an equivalent in which the parallel R and C are replaced by equivalent series elements whose values are in (2)

The Design of Radio-Receiver Input Stages Having a Frequency-Dependent Impedance in the Tuned-Circuit.

and (3). Introduction of the correcting impedance leads to two effects: the circuit damping is increased and there is detuning. Eqs.(8) and (9) are respectively the resistance and capacitance to be introduced in terms of frequency, coil inductance and two quantities, d^* and χ (chi). d^* is the frequency-dependent dissipation factor, while χ is the number of times that the introduced reactance is less than the reactance of the coil. The design of the input stage of a superhet receiver is now considered. The relevant parameters are: tuning range, 150 - 415 kc/s; bandwidth, 7000 c/s; permissible non-uniformity in the pass-band, 1.5 db; image rejection, 35 db; permissible variation in gain over the range, 2; aerial parameters, $L_A = 20\ \mu H$, $R_A = 20$ ohms, $C_A = 150\text{-}300$ pF; intermediate frequency, 465 kc/s. In order to allow for local oscillator drift and tracking error the actual bandwidth at the long-wave end is taken as 9000 c/s and that at the s.w. end of the range is thus 10 kc/s. If the permissible variation in circuit magnification is not to

be exceeded then the damping factors for each end of the band are 9.35% and 3.76%. Under these conditions the image rejection is greater than 37 db and the selectivity hardly varies. If the damping at the upper frequency is not reduced, i.e. it is chosen from the condition of obtaining the necessary bandwidth at the worst point, then the image rejection is less than 30 db. The recommended practical circuit is Fig.3 in which the aerial is coupled in through a transformer and the main tuning condenser carries a small trimmer. The main tuning condenser is 510-17 pF, the trimmer is 8-30 pF, the tuning coil is 2.09 mH, the coupling inductance to the aerial is 15.28 mH, the coupling coefficient is 0.16. Table 1 shows that the additional damping to be introduced amounts to 0.0775 at 150 kc/s and 0.0216 at 415 kc/s. Assuming a "swamping" factor of $\chi = 60$, then $R = 160$ ohm and $C \simeq 1430$ pF. The effective detuning is 1%. Table 2 shows how the bandwidth varies across the tuning range, while Fig.4 plots

The Design of Radio-Receiver Input Stages Having a Frequency-Dependent Impedance in the Tuned-Circuit.

effective circuit magnification, image rejection and damping factor against signal frequency. There are 4 figures, 3 tables and 3 Soviet references.

SUBMITTED: December 24, 1957.

BORISOV, VSEVOLOD ALEKSANDROVICH, kand.tekhn.nauk, dotsent

Use of an electronic model for studying transient processes in a d.c. motor. Izv. vys. ucheb. zav.; elektromekh. 4 no.5:7-14 '61. (MIRA 14:7)

1. Kafedra elektrifikatsii promyshlennykh predpriyatiy i ustanovok Ivanovskogo energeticheskogo instituta.
(Elecyric motors, Direct current)
(Transients(Electricity))

S/196/61/000/012/021/029
E194/E155

AUTHOR: Borisov, V.A.

TITLE: A direct-current drive with power semiconductor rectifiers and step-wise voltage changes

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.12, 1961, 10, abstract 12K 71. (Vestn. elektroprom-sti, no.7, 1961, 45-48)

TEXT: It is proposed to use an auto-transformer or a transformer with several voltage tappings and semiconductor rectifiers to supply a d.c. motor. In the intervals between speed ranges corresponding to steps of armature voltage the speed is controlled by varying the independent field of the motor. The total control range using both methods is of the order of 1:7 - 1:30. The preferred number of voltage steps is 3 - 4. They are altered either by a manual changeover switch or by a controller operating on contactors. An advantage of the system as compared with inductance control consists in the possibility of using a single transformer for different motors; others are

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A direct-current drive with power ...

the small size and weight of the equipment and the higher power-factor. Disadvantages are: the large amount of apparatus in the power circuit, inadequate speed stability at the low limit of control, and the need for special high-speed protection of the rectifier, which cannot withstand overload. A procedure is given for calculating the voltage steps and the control range, and experimental data are given for a motor of 1 kW at a voltage of 220 V.
4 literature references.

[Abstractor's note: Complete translation.]

Card 2/2

L 17331-63 BDS/EEC-2/EED-2/EEO-2 AFFTC/ASD/ESD-3/APGC Pm-4

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TITLE: High-power pulsed modulators for high-frequency amplifiers and oscillators without long-line shapers

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ABSTRACT: Two types of pulsed modulators intended for h-f equipment in the supply channel of particle accelerators are described. The modulators do not contain pulse-shaping long lines and, hence, appear to eliminate many drawbacks associated with such lines. Instead, a partial discharge of a capacitor is used. Switching is performed by thyratrons. One circuit is designed for a power amplifier 1 Mw with a pulse duration of 200 microsec and a repetition rate of 5 cps;

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